



UNIVERSITI PUTRA MALAYSIA

**THE PERCEPTION OF LOCAL FRONTLINERS ON LOCAL-LEVEL
ECOTOURISM INSTITUTIONAL ARRANGEMENT FOR RESOURCE
PROTECTION IN KUALA TAHAH, TAMAN NEGARA PAHANG**

YIP HIN WAI.

FH 2005 6

**THE PERCEPTION OF LOCAL FRONTLINERS ON LOCAL-LEVEL
ECOTOURISM INSTITUTIONAL ARRANGEMENT FOR
RESOURCE PROTECTION IN KUALA TAHAN,
TAMAN NEGARA PAHANG**

By

YIP HIN WAI

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Master Science**

May 2005



WE LEARN SOMETHING NEW EVERYDAY

This thesis is dedicated to:

People whom I met in the past and at the present moment
They have at one point or another played an important role
in contributing to where I am now.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for a degree of Master of Science

**THE PERCEPTION OF LOCAL FRONTLINERS ON LOCAL-LEVEL
ECOTOURISM INSTITUTIONAL ARRANGEMENT FOR
RESOURCE PROTECTION IN KUALA TAHAN,
TAMAN NEGARA PAHANG**

By

YIP HIN WAI

May 2005

Chairman : Associate Professor Abdullah Mohd, PhD

Faculty : Forestry

A survey was administered using questionnaires to obtain the local frontliners' opinions on ecotourism institutional arrangement for resource protection in Kuala Tahan, Taman Negara Pahang. The survey was conducted to 103 respondents comprising the personnel of the Taman Negara management and local entrepreneurs, including guides, boat operators, floating restaurants owners and chalet operators and resort's staffs. The questionnaires cover the frontliners' perception regarding tourism impacts on natural resources, local-level institutional arrangement, and the socio-demographic backgrounds. Descriptive, χ^2 test, factor analysis, and regression analysis were applied to analyse the data.

The results of the study showed that most of the respondent perceived the impacts of ecotourism to be not serious. Further analysis showed that there were significant differences in perception among the various income groups in relation to the impacts on the resources. The results showed that there were significant differences in terms of their perceptions on loss of ground cover plants, wildlife displacement, number of wildlife reduced, loss of Park's resources (for example, taking of plants and rocks

for souvenirs), littering, and water pollution. Here, the frontliners who received higher income (above RM2000) were more concerned about the resource condition. In addition, there were significant differences between frontliners of park management and non-park management on their perception toward impacts on wildlife.

The results of factor analysis indicated that the local-level institutional arrangement factors in Taman Negara as perceived by local frontliners were joint management operation (eigenvalue of 4.399), sharing of technical skills (2.528), adoption of best practices (2.088) and intellectual forum (1.062), which should be recognised by both parties. Based on the eigenvalues, a conceptual framework for local-level institutional arrangement was developed and discussed to show how different frontliners could involve in the arrangement.

The results of regression analysis showed that socio-demographical backgrounds of frontliners did not influence the agreement upon this institutional arrangement with the exception of age. Older frontliners had better understanding upon the benefits of this type of involvement or participation and able to accept this arrangement that eventually helps to protect the park's resources. In other words, through years of personal learning and experience in ecotourism, it is expected that the frontliners are willing to accept this initiative in which they will gain direct benefits through the participation of ecotourism activities.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**PERSEPSI PEKERJA BARISAN DEPAN TEMPATAN TERHADAP
PENGATURAN INSTITUSI EKOPERLANCONGAN PERINGKAT
TEMPATAN UNTUK PERLINDUNGAN SUMBER DI
KUALA TAHAN, TAMAN NEGARA PAHANG**

Oleh

YIP HIN WAI

Mei 2005

Pengerusi : Profesor Madya Abdullah Mohd, PhD

Fakulti : Perhutanan

Satu survei telah dijalankan dengan menggunakan soal selidik untuk mendapatkan pendapat-pendapat pekerja barisan depan mengenai pengaturan institusi ekoperlancongan di Kuala Tahan, Taman Negara Pahang. Kajian ini melibatkan 103 responden yang terdiri daripada pekerja pengurusan Taman Negara dan pengusaha tempatan, termasuk pemandu pelancong, operator bot, pemilik restoran terapung dan operator syele serta staf resot. Soal selidik ini meliputi persepsi pekerja barisan depan terhadap impak perlancongan terhadap sumber alam, pengaturan institusi peringkat tempatan dan latar belakang sosial demografik. Analisis secara deskriptif, χ^2 , analisis faktor dan regresi telah digunakan untuk menganalisa data.

Keputusan kajian ini menunjukkan bahawa kebanyakan mereka berpersepsi bahawa impak-impak ini adalah tidak serius. Walau bagaimanapun, terdapat perbezaan persepsi yang ketara di antara pekerja-pekerja barisan depan dari kumpulan pendapatan yang berbeza mengenai impak perlancongan terhadap sumber alam. Keputusan menunjukkan terdapat perbezaan yang ketara dari segi kesedaran mereka terhadap kehilangan tumbuhan penutup bumi, hidupan liar terhalau, bilangan

terhadap kehilangan tumbuhan penutup bumi, hidupan liar terhalau, bilangan hidupan liar berkurangan, kecurian sumber taman (contohnya mengambil tumbuhan dan batu sebagai cenderamata), sampah dan pencemaran air sungai. Pekerja barisan depan yang menerima sumber pendapatan yang tinggi (lebih daripada RM 2000) lebih mengambil berat tentang keadaan sumber tersebut. Tambahan pula, terdapat juga perbezaan yang ketara di antara pekerja barisan depan daripada pengurusan taman dan bukan pengurusan taman dari segi kesedaran mereka terhadap impak pada hidupan liar.

Keputusan analysis factor menunjukkan faktor-faktor pengaturan institusi ekoperlancongan peringkat tempatan adalah terdiri daripada operasi pengurusan bersama (dengan nilai eigen 4.399), perkongsian kemahiran teknikal (2.528), perlaksanaan amalan terbaik (2.088) dan forum intelektual (1.062) yang perlu disedari oleh kedua-dua pihak. Satu rangka kerja konsep untuk pengaturan institusi peringkat tempatan telah dibentuk berdasarkan nilai-nilai eigen ini dan dibincangkan untuk menunjukkan penglibatan pekerja barisan depan dalam pengaturan ini.

Daripada keputusan analisis regresi, latar belakang sosial-demografik pekerja barisan depan tidak mempengaruhi persetujuan mereka terhadap pengaturan institusi ekoperlancongan ini kecuali faktor umur. Pekerja barisan depan yang lebih tua mempunyai pemahaman yang lebih dalam terhadap kemanfaatan yang dapat diperolehi daripada penglibatan ini dan mereka adalah sanggup menerimanya sebagai satu pengaturan yang dapat melindungi sumber di taman ini. Dalam kata lain, mereka yang mempunyai pembelajaran secara peribadi dan pengalaman yang diperolehi dari ekoperlancongan dijangkakan adalah lebih cenderung untuk

menyokong inisiatif ini yang selama ini telah memberi faedah-faedah kepada mereka melalui penglibatan dalam perkhidmatan aktiviti ekoperlancongan.

ACKNOWLEDGEMENTS

I would like to express my grateful acknowledgement and appreciation to the Supervisory Committee Chairman, Assoc. Prof. Dr. Abdullah Mohd, and committee members, Assoc. Prof. Dr. Awang Noor Abd. Ghani and Dr. Zahid Emby, for their constructive ideas, encouragement and assistance in the preparation and completion of this thesis. With them around, we, as the students, felt that there is nothing we cannot overcome.

My sincere thanks and appreciation go to Department of Wildlife and National Parks (Perhilitan) for giving me permission to do this research, and providing assistant and information. I would like to extend a similar regard to the superintendent of Taman Negara Pahang, Mr. Ahmad Azahar Mohamed, and the Perhilitan staffs of Taman Negara Pahang, as well as the ecotourism frontliners in Kuala Tahan for their assistant and cooperation for realising this research.

I would like to thank UPM for the PASCA scholarship. A special mention is dedicated to Prof. Dr. Turiman Suandi and Assoc. Prof. Dr. Jegak Uli for their enlightening my knowledge and information covering social research method and statistical analysis using SPSS. They have motivated me to continually extend my knowledge in this field.

Much appreciation goes to all lecturers and staff of the Faculty of Forestry, who direct and indirectly, help and give moral support during my study period. An

extended appreciation to all FORGRAD friends; Pak Joko, Puan, Lin, Kak Wan, Nawi, Safa, Baharum, Tan, Chee and others in the Graduate Room, whom I do not mention here. I would like to thank them for cheering up during my campus life.

Last but not least, my deepest appreciation and thanks to my family for their concerns, inspirations, encouragement, and continuous support during my study.

I certify that an Examination Committee met on 27th May 2005 to conduct the final examination of Yip Hin Wai on his Master of Science thesis entitled “The Perception of Local Frontliners on Local-Level Ecotourism Institutional Arrangement for Resource Protection in Kuala Tahan, Taman Negara Pahang” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

Ahmad Shuib, PhD

Associate Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Chairman)

Azlizam Aziz, PhD

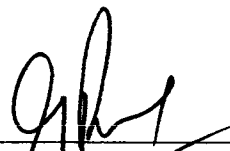
Lecturer
Faculty of Forestry
Universiti Putra Malaysia
(Internal Examiner)

Rusli Mohd, PhD

Associate Professor
Faculty of Forestry
Universiti Putra Malaysia
(Internal Examiner)

Kalsom Kayat, PhD

Associate Professor
Faculty of Tourism, Hospitality and
Environmental Management
Universiti Utara Malaysia
(External Examiner)



GULAM RUSUL RAHMAT ALI, PhD
Professor/Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: **22 AUG 2005**

This thesis submitted to the Senate of Universiti Putra Malaysia has been accepted as fulfilment of the requirements for the degree of Master of Science. The members of the Supervisory Committee are as follows:

Abdullah Mohd, PhD

Associate Professor
Faculty of Forestry
Universiti Putra Malaysia
(Chairman)

Awang Noor Abd. Ghani, PhD

Associate Professor
Faculty of Forestry
Universiti Putra Malaysia
(Member)

Zahid Emby, PhD

Lecturer
Faculty of Human Ecology
Universiti Putra Malaysia
(Member)



AINI IDERIS, PhD

Professor/Dean
School of Graduate Studies
Universiti Putra Malaysia

Date : 08 SEP 2005

DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

Yip Hin Wai

YIP HIN WAI

Date : 21. 7. 2005

TABLE OF CONTENTS

	Page
DEDICATION	ii
ABSTRACT	iii
ABSTRAK	v
AKNOWLEDGEMENTS	viii
APPROVAL	x
DECLARATION	xii
LIST OF TABLES	xv
LIST OF FIGURES	xviii
LIST OF ABBREVIATIONS	xix
 CHAPTER	
 1. INTRODUCTION	
1.1 Background of the Study	1
1.2 Problem Statement	4
1.3 Objective of the Study	8
1.4 Significance of the Study	8
1.5 Scope and Limitation	11
1.6 Operational Terminology	13
 2. LITERATURE REVIEW	
2.1 Ecotourism: Introduction	16
2.2 Ecotourism and the Protected Areas	20
2.3 Ecotourism and Resource Protection Issues	23
2.4 Institutional Arrangement and Ecotourism	28
2.4.1 Role of Local Frontliners	31
2.4.2 Local-level Institutional Arrangement	36
2.4.3 Institutional Arrangement and Resource Protection	38
Operational Activities in Resource Protection	39
Participation in Decision Making	41
Learning and Growth in Knowledge	42
Knowledge Sharing	44
2.5 Variables influencing the Agreement of Institutional Arrangement	46
 3. STUDY AREA DESCRIPTION	
3.1 Background	50
3.2 Ecotourism Development in Taman Negara	55
3.3 Ecotourism in Kuala Tahan, Taman Negara Pahang	61
 4. RESEARCH METHODS	
4.1 Conceptual Framework	68
4.2 Research Design	75
4.2.1 Survey Instrument	75
4.2.2 Population and Sample	78
4.2.3 Pilot Survey	79

4.3	Data Collection	80
4.4	Data Processing and Data Cleaning	81
4.5	Statistical Analysis of Data	82
4.5.1	Explore Data Analysis	82
4.5.2	Descriptive Analysis	83
4.5.3	Factor Analysis	84
4.5.4	Regression Analysis	87
5.	RESULTS AND DISCUSSION	
5.1	Local Ecotourism Frontliners Profiles	93
5.1.1	Socio-demographic Background	94
5.1.2	Involvement in Ecotourism Activities	99
5.2	Perception on Tourism Impacts on the Natural Resource	100
5.2.1	Local Frontliners' Perception on Tourism Impacts	101
5.2.2	Local Frontliners' Perception on Tourism Impacts based on Different Socio-demographic Backgrounds	104
5.3	Local-level Institutional Arrangement	117
5.3.1	Ecotourism Institutional Arrangement in Taman Negara Pahang	117
5.3.2	Frontliners' Perception on the Existing Ecotourism Institutional Arrangement based on Different Social-demographic Backgrounds	120
5.3.3	Activities of Ecotourism Institutional Arrangement	129
5.3.4	Main Factors of Local-level Institutional Arrangement	134
5.4	Influence of Local Ecotourism Frontliners' Socio-demographic Backgrounds on their Agreement on Local-level Institutional Arrangement for Resource Protection	147
5.4.1	Frontliners' Willingness to Participate in Resource Protection Activities	147
5.4.2	Frontliners' Socio-demographic Background and Their Willingness to Involve in Resource Protection Activities	149
5.4.3	Influence of Local Frontliners' Socio-demographic Backgrounds on their Agreement on Local-level Institutional Arrangement	156
6.	CONCLUSIONS AND RECOMMENDATIONS	
6.1	Conclusions	162
6.2	Recommendations	164
6.2.1	Recommendations for Ecotourism Practices	164
6.2.2	Recommendations for Further Studies	168
	REFERENCES	170
	APPENDICES	187
	BIODATA OF THE AUTHOR	230

LIST OF TABLES

Table	Page
2.1 The ideal types of hard and soft ecotourism	18
2.2 The six IUCN management categories of protected area	22
4.1 Distribution of variables in Question 3 based on theoretical factors of ecotourism institutional arrangement	77
4.2 Proportional of respondents using convenient sampling	79
4.3 Explanatory variables for multiple linear regression model	89
5.1 Socio-demographic profile of respondents	94
5.2 The distribution of respondents according to experience and employment status in ecotourism	98
5.3 Distribution of respondents by type of ecotourism activities involved	100
5.4 Perception of local frontliners with respect to tourism impacts on natural resources	102
5.5 Reliability analyses for tourism impacts on natural resources	104
5.6 Perception of frontliners with respect to tourism impacts on natural resources based on age groups	105
5.7 Frontliners' perception on tourism impacts on natural resource based on education level	107
5.8 Perception of frontliners with respect to tourism impacts on natural resource based on monthly income	110
5.9 Perception of frontliners with respect to tourism impacts on natural resource based on nature of work	112
5.10 Perception of frontliners with respect to tourism impacts on natural resources based on years of involvement in ecotourism activities	114
5.11 Frontliners' perception on ecotourism institutional arrangement in Kuala Tahan, TNP	118

5.12	Frontliners of different age groups and their perception on ecotourism institutional arrangement	120
5.13	Frontliners of different education level and their perception on ecotourism institutional arrangement	122
5.14	Frontliners of different income groups and their perception on ecotourism institutional arrangement	124
5.15	Frontliners of different nature of work and their perception on ecotourism arrangement	126
5.16	Frontliners of different years of involvement in ecotourism activities and their perception on ecotourism institutional arrangement	128
5.17	Ecotourism institutional arrangement activities for resource protection	130
5.18	Rotated factor matrix of the local-level institutional arrangement for resource protection	135
5.19	Main factors of the local-level institutional arrangement for resource protection	137
5.20	Reliability analyses for items in four local-level institutional arrangement factors	142
5.21	Willingness of frontliners to participate in resource protection activities	148
5.22	Willingness of frontliners to participate in resource protection based on age groups	149
5.23	Willingness of frontliners to participate in resource protection based on their education level	151
5.24	Willingness of frontliners to participate in resource protection based on income groups	152
5.25	Willingness of park management and non-park management frontliners participating in resource protection	154
5.26	Willingness of frontliners to participate in resource protection based on years of ecotourism activities involvement	155
5.27	Mean score of local-level institutional arrangement factors	157

5.28 Model summary of frontliners’ agreement of local-level institutional arrangement 160



LIST OF FIGURES

Figure	Page
2.1 Conceptual representation of a partnership forum for protected area	31
2.2 Ecotourism towards sustainability of natural areas	35
2.3 The conventional hierarchy of knowledge	45
3.1 Map of Taman Negara	55
3.2 Kuala Tahan and vicinity	62
4.1 Conceptual Framework	70
5.1 Local-level institutional arrangement structure and different levels of frontliners participations	143

LIST OF ABBREVIATIONS

DWNP / Jabatan Perhilitan	Department of Wildlife and National Parks (Jabatan Perlindungan Hidupan Liar dan Taman Negara)
MDJ	Majlis Daerah Jerantut (Jerantut District Council)
MOCAT	Ministry of Culture, Art and Tourism (Currently partition into Ministry of Art, Culture and Heritage, and Ministry of Tourism)
MOSTE	Ministry of Science, Technology and the Environment (Currently partition into Ministry of Science, Technology and Innovation, and Ministry of Natural Resources and the Environment)
MTPB	Malaysian Tourism Promotion Board (Tourism Malaysia)
PSIK	Projek Santuari Ikan Kelah (Malaysian Mahseer Sanctuary Project)
TNP	Taman Negara Pahang (Pahang National Park)

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

In recent years, ecotourism has become a popular term emerged in the tourism industry. The demand for ecotourism is increasing mainly among urban people in developed and developing countries. The process of urbanisation has attracted rural people to live in urban areas. Many people are looking for green belt in the city or elsewhere to escape this rigid urban life. People are likely to retreat to the natural areas for pleasure in their leisure time. Many enjoy visiting the natural area periodically in order to enjoy the nature and to pert-up their emotions. The Malaysian society has changed alongside industrialisation where urbanisation occurred in major parts of the country. Many Malaysians have realised the needs for enjoyment in natural surroundings, which encourage them to take trips to areas with such settings. As such, ecotourism has become a popular word among politicians, tour operators, the public and domestic or foreign visitors (Stecker, 1996; Backhaus, 2000). In relation, the elements of ecotourism have been promoted in the tourism sector. Since early 1990s, Malaysian Tourism Promotion Board (MTPB) has been promoting these areas, for instance by using “Fascinating Malaysia Naturally” as a promotion theme for Visit Malaysia Year 1992 (Mohd Nizam, 1994).

Ecotourism activities are directly depended on the availability of natural setting in a relatively undeveloped condition. Natural resources including scenery and topography, water elements, flora, and fauna are important for ecotourism industry. Many areas, including terrestrial and marine areas, in the country are still in their nature state, and they are opened to tourists (MTPB, 1999).

Most of these natural areas and the related resources are found within the protected areas. These areas provided relatively undisturbed environment for doing ecotourism activities. Subsequently, in order to gain economic benefits from this sector, the government is promoting ecotourism activities in the protected areas, including national parks, state parks, recreational forests, marine parks, and wildlife reserves and sanctuaries (Sivanathan, 2000; EPU, 2001). Therefore, protected area managements need to ensure the protection of resources is effective in tourist intensive use zones through implementation of visitor management. In the same time, the development of ecotourism industry in Malaysia is mainly based on National Ecotourism Plan (NEP) of Malaysia since mid 1990s. The NEP had identified several protected areas as potential sites for ecotourism development. This plan would be used as guidance in developing and promoting these areas as ecotourism activities sites.

Ecotourism industry is considered as an alternative from the mass nature tourism (Weaver, 2001a). It is one way to protect the natural areas through minimising visitor impacts in term of social, economic or environmental aspects. Therefore, ecotourism should be used to promote sustainable use of natural resources. The main

idea of ecotourism is to strive a balance between ecocentric and anthropocentric use of natural resources. In the case of mass tourism, which emphasised on the anthropocentric needs, priority is given to the convenience of visitors rather than the natural settings. Thus, mass tourism is likely to lead to the degradation of natural resources both in quality and in quantity. However, if full consideration were given on natural resource protection without giving the public to use the area, the real purposes of protecting these areas would be doubtful.

On the other hand, ecotourism industries have provided the opportunities for the local communities to involve themselves in tourism business, which in turn may improve their current living conditions (Abdullah *et al.*, 2000). In most cases where ecotourism activities are held in protected areas, the locals that live nearby or within the protected area are beneficial from the ecotourism development. This has improved their livelihood from traditional practices to a more stable and lucrative business. They might involve in this industry by providing recreational activities and services, such as accommodation, transportation, food, tour guide, and so forth, to the visitors.

Consequently, the industrialisation of ecotourism had lead to the establishment of appropriate and effective institutional arrangements for managing the relationship between tourism activities and the environment (Hall, 2000). Multi scales and levels of institutional arrangement are surrounding the tourism industry and the environment issues, which involved various legislation and regulations in the national and local level. The key aspect of the arrangement is to have an effective

management that would benefit the environment and the ecotourism industry, including communities that are depending on it. As such, local ecotourism frontliners should be treated as allies in resource protection and conservation.

In relation, the establishment of ecotourism must be beneficial to the local communities, which would further encourage their involvement in tourist infrastructure development (Mulholland and Eagles, 2002). The benefits could range from the employment of locals as park management staff, labour of tourism infrastructure development, and tour guides in the area (Loon and Polakow, 2001). This industry should enhance the living of the local communities while considering on the environment aspects. By any means, the main element in ecotourism industry is still the nature settings. The local community would utilise such natural settings for these purposes. Therefore, local communities and the environment are interdependent in the ecotourism industry development. The locals must have pro-conservation attitude for involving in this natural area dependent industry. In order to ensure the sustainability of this industry, they must take responsible on these natural resources (Salleh and Wayakone, 1997).

1.2 Problem Statement

The development of ecotourism has expanded to rural areas in Peninsular Malaysia, particularly in places with rich natural setting. A case in point is the development of ecotourism by local communities in Ulu Tembeling Region, living adjacent to the

Taman Negara. These communities have been involving themselves in the ecotourism industry, especially those who live in Kuala Tahan (Hood, 1996). Majority of them are able to take these economic opportunities brought about by ecotourism to improve their living conditions (Wan Sabri *et al.*, 1991).

Taman Negara is one of the popular ecotourism destinations in Peninsular Malaysia. Ecotourism is able to promote a sustainability use of tourism destinations, especially in protected areas meanwhile providing opportunities to the local communities for improving their quality of life through income generation. The sustainability of this industry is depending on the well being and effective protection of natural resources. Such a responsibility shall not only rest upon the park management. Other stakeholders can take some responsibility. Many protected area management activities have shown to be lack of institutionalised capacity to monitor and regulate human activities in this vast area. Consequently, due to limited capacity on the management side, local communities have to play a vital role in assisting park management in order to achieve sustainable use for tourism and protection of the area. Here, the locals are important as resource stakeholders and they are able to assist in sustainable use of the resources through providing ecotourism activities. However, in many cases, they were always left out from the managerial process. For example, the local representatives were excluded from the Taman Negara Advisory Council. As a result, they are not able to participate or contribute in the management of the park (Abdullah, 1995).